AMENDMENTS TO THE CLAIMS

1. (currently amended) A micro-shape transcription method comprising:

preparing a mold having a transcription face on which a concavo-convex pattern is formed,

pressing the transcription face against a base material softened by heating,

then forcibly separating the mold from the base material to transcribe a reverse pattern of the concavo-convex pattern to the surface of the base material,

wherein the sectional form of the concavo-convex pattern is rectangular,

wherein when assuming a temperature for pressing the mold against the base material as T_1 (°C), a temperature for separating the mold from the base material as T_2 (°C), thermal expansion coefficients of the mold and the base material as α_a and α_b, and the maximum distance between the transcription center of the transcription face and the concavo-convex pattern as d (mm), the following relations (1), (2), and (3):

$$T_1 \geq T_2 \qquad \ldots(1)$$

$$|\alpha_a - \alpha_b| \cdot (T_1 - T_2) \cdot d \leq 4 \times 10^{-2} \qquad \ldots(2)$$

$$|\alpha_a - \alpha_b| \geq 50 \times 10^{-7}/°C \qquad \ldots(3)$$

are simultaneously satisfied.

2. (original) The micro-shape transcription method according to claim 1, wherein the transcription face of the mold is a plane or stepped plane.

3. (cancelled)

4. (previously cancelled)

5. (original) The micro-shape transcription method according to claim 1 or 2, wherein the concavo-convex pattern has a line width of 100 μm or less.

6. (original) The micro-shape transcription method according to claim 1 or 2, wherein the concavo-convex pattern has a depth of 1 μm or more.

7. (original) The micro-shape transcription method according to claim 1 or 2, wherein the base material uses an optically-transparent thermoplastic resin or glass.

8. (original) The micro-shape transcription method according to claim 7, wherein the thermoplastic resin is selected from the group consisting of polyolefin-, polymethyl-methacrylate-, polycarbonate-, norbornane-, and acrylic-based resins.

9. (currently amended) A micro-shape transcription apparatus comprising:

a first mold means provided with a transcription face having a micro-shape <u>that is rectangular in cross section</u>;

a second mold means facing the first mold means and holding a base material thereon;

a mechanism for driving at least one of the first and second mold means;

a heating source for controlling temperatures of the first and second mold means such that when a temperature for pressing the transcription face against the base material

is T_1 (°C), a temperature for separating the transcription face from the base material is T_2 (°C), thermal expansion coefficients of the transcription face and the base material are α_a and α_b, and a maximum distance between a transcription center of the transcription face and a concavo-convex pattern is d (mm), the following relations (1), (2), and (3):

$T_1 \geq T_2$ ...(1)

$|\alpha_a - \alpha_b| \cdot (T_1 - T_2) \cdot d \leq 4 \times 10^{-2}$ ...(2)

$|\alpha_a - \alpha_b| \geq 50 \times 10^{-7}/°C$ ...(3)

are simultaneously satisfied; and

a vacuum chuck for attracting and fixing the base material to the second mold means.

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10. (original) An optical-component manufacturing method wherein a pattern for controlling light of an optical component is formed in accordance with the micro-shape transcription method of claim 1 or 2.

11. (original) An optical waveguide manufacturing method wherein a pattern corresponding to a core of an optical component is formed in accordance with the micro-shape transcription method of claim 1 or 2.

12. (previously added) The micro-shape transcription method of claim 1, wherein T_1 is up to 180°C.

13. (previously added) The micro-shape transcription method of claim 1, wherein T_2 is 150°C.

14. (previously added) The micro-shape transcription method of claim 1, wherein T_1 is 160°C and T_2 ranges from 100-140°C.

15. (previously added) The micro-shape transcription method of claim 1, wherein T_1 is 180° C and T_2 ranges from 100-150° C.

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16. (previously amended) The micro-shape transcription apparatus according to claim 9, wherein T_1 is 160°C and T_2 ranges from 100-140°C.

17. (previously amended) The micro-shape transcription apparatus according to claim 9, wherein T_1 is 180° C and T_2 ranges from 100-150° C.

18. (currently amended) A mold for a micro-shape transcription apparatus that molds a base material having a thermal expansive coefficient of α_b at a temperature T_1 and that separates said mold from the base material while the base material is at a temperature T_2 where $T_1 \geq T_2$, said mold comprising:

a ~~material~~ <u>transcription face</u> having a thermal expansion coefficient of α_a, and

~~a~~ <u>said</u> transcription face having a maximum distance d between a transcription center of the transcription face and a concavo-convex pattern of the transcription face <u>is rectangular in cross section,</u>

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wherein $|\alpha_a - \alpha_b| \geq 50 \times 10^{-7}/°C$, and

wherein $|\alpha_a - \alpha_b| \cdot (T_1 - T_2) \cdot d \leq 4 \times 10^{-2}$.